AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A computer-readable storage medium for storing a shadow volume generation program that causes a computer to generate a shadow volume used for rendering a shadow cast by an object placed in a three-dimensional virtual space, wherein the shadow volume generation program causes the computer to execute the steps of:

writing a Z value corresponding to each pixel within a predetermined area including at least the shadow casting object, into a Z-buffer, using a light source placed in the virtual space as a viewpoint; and

generating the shadow volume from a plane object by determining a position of each vertex of a plurality of polygons composing the plane object, with regard to a direction perpendicular to a surface of the plane object in accordance with the Z value of each pixel written in the Z-buffer, the Z value of each pixel written in the Z-buffer being unchanged during shadow volume generation.

2. (Original) A storage medium according to claim 1, wherein

a shape of the plane object is defined by a plurality of vertices, each having different combination of an X-coordinate and a Z-coordinate, and

in the shadow volume generation step, a Y-coordinate of each vertex of the plane object is determined in accordance with the Z value of each pixel written in the Z-buffer.

3. (Original) The storage medium according to claim 1, wherein

the light source is a point light source, and

the shadow volume generation step includes a step of determining a position of each

vertex of the plane object with regard to a direction parallel to a surface thereof in accordance

with the Z value of each pixel written in the Z-buffer.

4. (Original) The storage medium according to claim 3, wherein

a shape of the plane object is defined by a plurality of vertices, each having a different

combination of an X-coordinate and a Z-coordinate, and

in the shadow volume generation step, the X-coordinate and the Z-coordinate of each

vertex of the plane object are determined in accordance with the Z value of each pixel written in

the Z buffer.

5. (Previously Amended) The storage medium according to claim 1, wherein the shadow

volume generation program further causes the computer to execute the steps of:

placing the shadow volume generated at the shadow volume generation step in the virtual

space in a virtual manner so that a height direction of the shadow volume coincides with a

direction of light emitted from the light source, and

rendering the shadow of the shadow casting object using the shadow volume placed in

the virtual manner.

6. (Currently Amended) A game device for generating a shadow volume used for

rendering a shadow cast by an object placed in a three-dimensional virtual space, comprising:

a Z-buffer;

a programmed logic circuit for writing a Z value of each pixel within a predetermined area including at least the shadow casting object, into the Z-buffer, using a light source placed in the virtual space as a viewpoint; and

a programmed logic circuit for generating the shadow volume from a plane object by determining a position of each vertex of a plurality of polygons composing the plane object, with regard to a direction perpendicular to a surface of the plane object in accordance with the Z value of each pixel written in the Z-buffer by the programmed logic circuit for writing the Z value, the Z value of each pixel written in the Z-buffer being unchanged during shadow volume generation.

7. (Currently Amended) A shadow volume generation method for generating a shadow volume used for rendering a shadow cast by an object placed in a three-dimensional virtual place, comprising the steps of:

writing a Z value of each pixel within a predetermined area including at least the shadow casting object, into a Z-buffer, using a light source placed in the virtual space as a viewpoint; and

generating the shadow volume from a plane object by determining a position of each vertex of a plurality of polygons composing the plane object with regard to a direction perpendicular to a surface of the plane object in accordance with the Z value of each pixel written in the Z-buffer, the Z value of each pixel written in the Z-buffer being unchanged during shadow volume generation.